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## THE NEBRASKA STATE MUSEUM

ERWIN H. BARBOUR, Director

The Thurston County Mastodon  
MASTODON GRANGERI, sp. nov.

BY ERWIN HINCKLEY BARBOUR

The skull and tusks of the Thurston County mastodon, found near Pender, have recently been remounted and added to the long list of mastodons, mammoths, and modern elephants to be seen in the cases of Elephant Hall, in the Nebraska State Museum. When found, the skull, teeth, and tusks were encased in Pleistocene gravel, and were in a state of perfect preservation. Contrary to instruction, they were pried out of their bed with poles before the writer could reach the spot, and the dome of the skull was ruined. The unbroken palate, however, with teeth in place and undamaged, and with parts of the incisive sheaths and the tusks complete and in proper position, was preserved.

Unlike typical forms, the tusks are long, slim, almost straight, curving but slightly and spreading but little at the tips. The length of each tusk is about nine feet, and the diameter five inches. These characteristics seem to apply to all mastodon tusks found as yet in this portion of the Great Plains. This does not mean that *Mastodon americanus* is wanting in Nebraska. To the contrary, numerous teeth and jaws have been found and are preserved in the State Museum, but no skulls with tusks from animals of the forest-loving type are positively known.

The Thurston County mastodon seems to represent a Plains type which differs from the ordinary forest type of *Mastodon americanus* and seems to be a distinct species. We are naming this specimen *Mastodon grangeri* in recognition of Dr. Walter Granger who has so furthered the cause of vertebrate palaeontology. The specimen was procured for the Morrill Palaeontological Collections of the State Museum, and is numbered 8-9-00. It is believed that several examples are represented in the State Museum. The Boyd County skull, No. 8-8-23, consisting of the palate with grinders complete, stumps of tusks, and the basi-cranial elements, has been prepared as a panel mount, and is referred to *Mastodon grangeri*. In this connection must be mentioned the Lancaster County skeleton which was partly exposed by Mr. Arthur Dobson, Class of 1911, which is apparently complete.

This specimen lies 15 feet deep in loess near Sheridan Boulevard and the entrance to Memorial Park, Lincoln. As far as explored the bones are in a state of extraordinary preservation, and their excavation will be undertaken, if possible, in the collecting season of 1934. Here again the tusks, where exposed, are as slim and straight as they are in *Mastodon grangeri*, to which we are referring it. In addition there are certain stray tusks showing the slim straight characteristics of *Mastodon grangeri*, but none showing the characteristics of the forest mastodon. The tusks of *Mastodon grangeri* seem to be distinctive, possibly determinative.

*Mastodon americanus* as exemplified by the Warren skeleton with its relatively short tusks, curving upward and outward, seems typical of the forest ranging mastodons. In some cases, however, typical mastodons have large and long tusks which are as helical as those of mammoths, and are considered indistinguishable from them. All such are totally unlike those of *Mastodon grangeri*.

Although teeth, bones, and jaws of *Mastodon americanus* are not rare in Nebraska, they are not in such profusion as those of the mammoths. In the history of this state, no complete skeleton of *Mastodon americanus* has been found.

Contrary to rule all three molars are present on each side and are perfectly preserved in *Mastodon grangeri*. In the elephants it is rare to find more than two teeth on a side in use at any one time. Molar one is worn and well cupped, in molar two the first grinding ridge is well worn, while molar three shows little wear, and cement is wanting. The tusks and the teeth indicate a mature but not aged individual. The teeth of *Mastodon grangeri*, compared with those of *Mastodon americanus*, seem narrow and relatively small even after making due allowance for wide variations in size. This holds true of the other specimens referred to this species. The third molar has four coarse grinding ridges and a heel, a condition prevailing in other specimens referred to this species. In *Mastodon americanus* the grinding ridges are commonly four and a heel, frequently five and a heel or talon.

#### MEASUREMENTS

Molar series, total length,  $13\frac{7}{8}$  inches (352 mm.)  
Palate, width between molars, No. 1,  $3\frac{3}{4}$  inches (94 mm.)  
Palate, width between molars, No. 3,  $3\frac{1}{2}$  inches (79 mm.)  
Molar 1, length  $3\frac{1}{4}$  inches (82 mm.)  
width 3 inches (76 mm.)

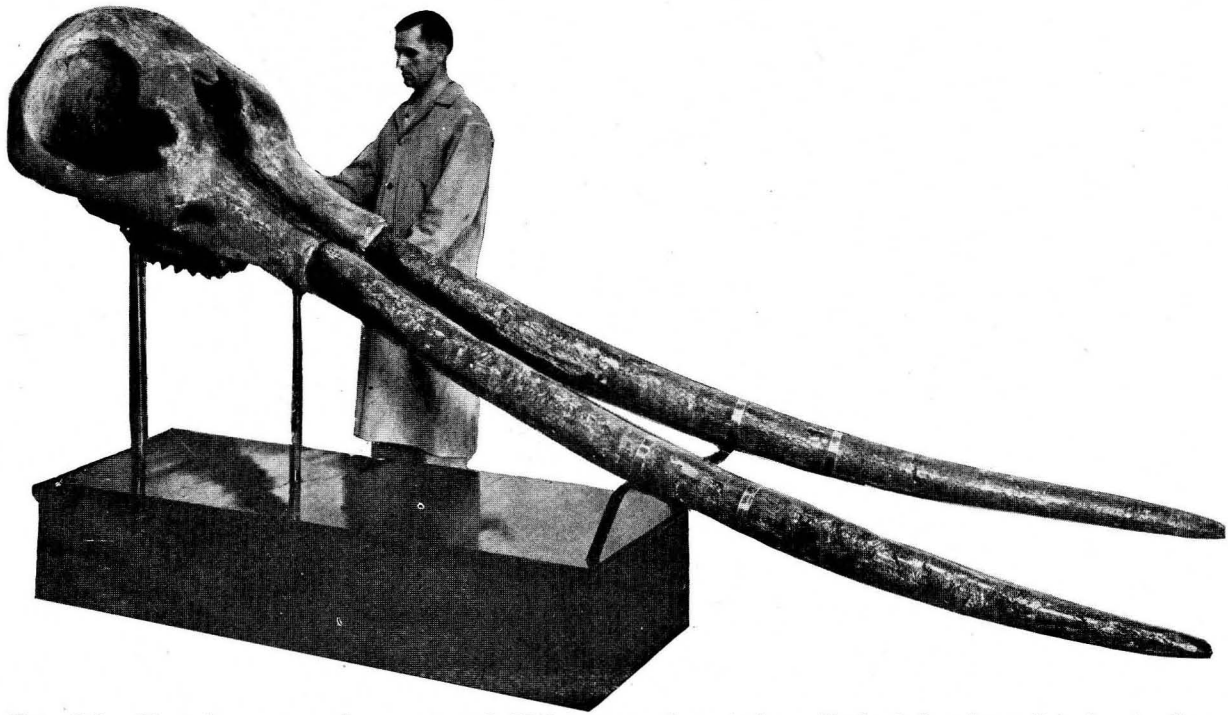


FIG. 170.—*Mastodon grangeri*, a supposed Plains type of mastodon. Tusks 9 feet long, 5 inches in diameter, and almost straight. Skull mostly restored. Three molars are present on each side. The Morrill Palaeontological Collections, the State Museum. Specimen 8-9-00. Pleistocene, Thurston County, Nebraska.

- Molar 2, length  $4\frac{1}{2}$  inches (114 mm.)  
width  $3\frac{3}{8}$  inches (85 mm.)  
Molar 3, length  $6\frac{3}{8}$  inches (162 mm.)  
width  $3\frac{3}{8}$  inches (85 mm.)  
height  $2\frac{3}{4}$  inches (70 mm.)

## THE OTOE COUNTY MASTODON

While the proof sheets of this bulletin were being read, a skull of *Mastodon americanus* with teeth and one tusk was found by Delphus Busacher in a new channel of the Nemaha River about  $1\frac{1}{2}$  miles east of Talmadge, Otoe County, Nebraska. This specimen was brought to the State Museum June 2, 1934, and catalogued 2-6-34. One tusk of massive proportions was secured. It is  $8\frac{1}{4}$  inches in diameter at the base,  $7\frac{1}{4}$  at the middle and  $6\frac{1}{8}$  where the tip was broken off. The length of this truncated tusk, measured on its outer curve, is 7 feet, and not less than 2 to 3 feet of the tip were broken off and lost. This tusk when whole must have equalled the length and massiveness of many of our mammoth tusks. It is the first example of *Mastodon americanus* from the State to show large, helical tusks. It is plainly an individual of heroic size, and when cleaned and mounted will receive further notice. The following measurements may be useful in making comparisons with *Mastodon grangeri*.

## MEASUREMENTS

- Molar 2, length, 5 inches (126 mm.)  
width,  $3\frac{5}{8}$  inches (92 mm.)  
height,  $2\frac{1}{4}$  inches (57 mm.)  
Molar 3, length, 8 inches (203 mm.)  
width, 4 inches (102 mm.)  
height,  $2\frac{3}{4}$  inches (70 mm.)

It is counted a fortunate circumstance that so many citizens of the state have taken pains to notify the State Museum of fossils found in their respective vicinities. Such friendly notifications often lead to important discoveries and are greatly appreciated. Citizens are urged to visit their State Museum and to become personally acquainted with its aims and purposes and with its fossil and modern animals.

The University of Nebraska,  
Lincoln, Nebraska,  
December, 1933.